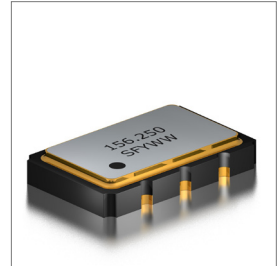


| Features |
|--|
| • ± 20 ppm (Frequency Stability) Available |
| • Ceramic Package |
| • LVDS |
| • Low Current Consumption |
| • Fundamental or 3rd Overtone Crystal Design |

| Applications |
|--------------------|
| • Fiber Channel |
| • Gigabit Ethernet |
| • PCI Express |



Part Numbering Guide

SLO 53 L 3 A 48 1 - 156.250M

SUNTSU LOW CURRENT OSC
5.0mm x 3.2mm


LVDS

SUPPLY VOLTAGE
1 : 1.8V \pm 5%
2 : 2.5V \pm 5%
3 : 3.3V \pm 5%

FREQUENCY STABILITY
A : ± 50 ppm
B : ± 30 ppm
C : ± 25 ppm
*D : ± 20 ppm

OPERATING TEMPERATURE RANGE
07 : 0°C - +70°C
16 : -10°C - +60°C
17 : -10°C - +70°C
27 : -20°C - +70°C
38 : -30°C - +85°C
48 : -40°C - +85°C

FREQUENCY MHz
TRI-STATE (ENABLE/DISABLE)
BLANK : No Connection
1 : Pin 1

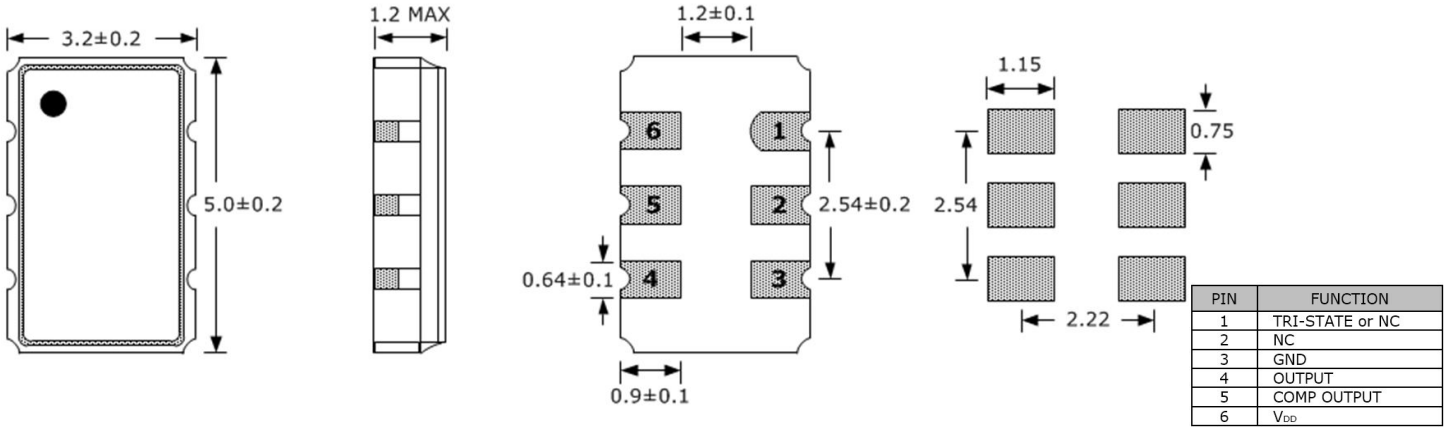


Cage Code : 4GUT4
To customize your parameters, contact a Suntsu representative.
* For Frequency stability option D, contact a Suntsu representative.

| Electrical Parameters | Units | Minimum | Typical | Maximum | Remarks |
|--|----------|---------------------|---------|---------------------|--|
| Frequency Range | MHz | 100 | | 320 | 135~175MHz(1.8V), 100~320MHz(2.5&3.3V) |
| Frequency Stability (Includes Initial Tolerance at 25°C, Frequency Stability over Operating Temperature, Output Load Change, Supply Voltage Change, and First Year Aging at 25°C.) | ppm | -20 | | +20 | See part numbering guide for options |
| Operating Temperature | °C | -40 | | +85 | See part numbering guide for options |
| Storage Temperature | °C | -55 | | +125 | |
| Supply Voltage (V _{DD}) - 1.8V Option | V | 1.710 | 1.8 | 1.890 | |
| Supply Voltage (V _{DD}) - 2.5V Option | V | 2.375 | 2.5 | 2.625 | |
| Supply Voltage (V _{DD}) - 3.3V Option | V | 3.135 | 3.3 | 3.465 | |
| Current (I _{DD}) | mA | | 15 | 20 | |
| Output Load (LVDS) | Ω | | | 100 | |
| Output Logic Levels High (V _{OH}) | V | | 1.43 | 1.6 | |
| Output Logic Levels Low (V _{OL}) | V | 0.9 | 1.1 | | |
| Differential Output Voltage (V _{OD}) | mV | 247 | 350 | 454 | |
| Differential Output Error (ρ V _{OD}) | mV | | | 50 | |
| Offset Voltage (V _{OS}) | V | 1.125 | 1.250 | 1.375 | |
| Offset Error (ρ V _{OS}) | mV | -50 | | 50 | |
| Rise (TR) and Fall (TF) Time | ns | | 0.25 | 0.5 | |
| Symmetry (Duty Cycle) | % | 45 | 50 | 55 | |
| Tri-State Input Voltage - Enable | V | 0.7*V _{DD} | | | No Connection |
| Tri-State Input Voltage - Disable | V | | | 0.3*V _{DD} | |
| Start-Up Time | ms | | | 5.0 | |
| Phase Jitter (12kHz ~ 20MHz) | ps | | 0.12 | 0.15 | |

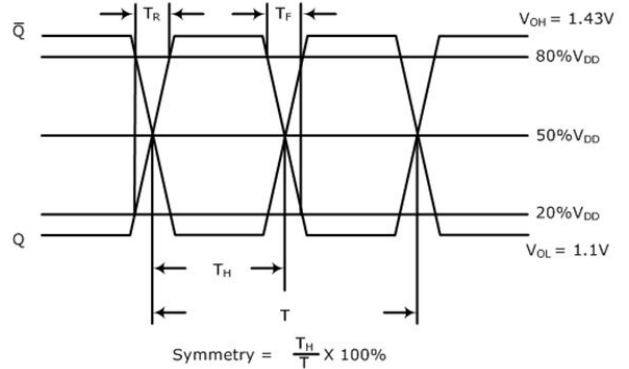
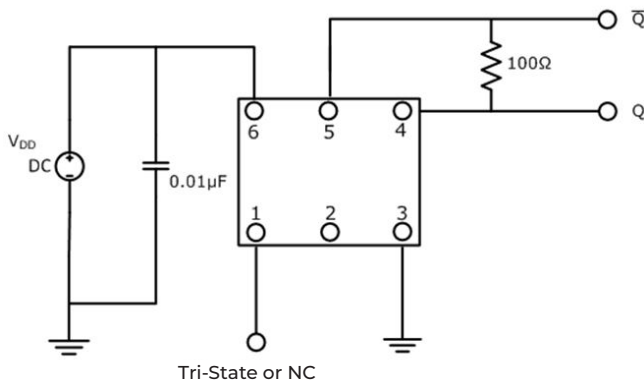
Outline Drawing & Land Pattern

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.

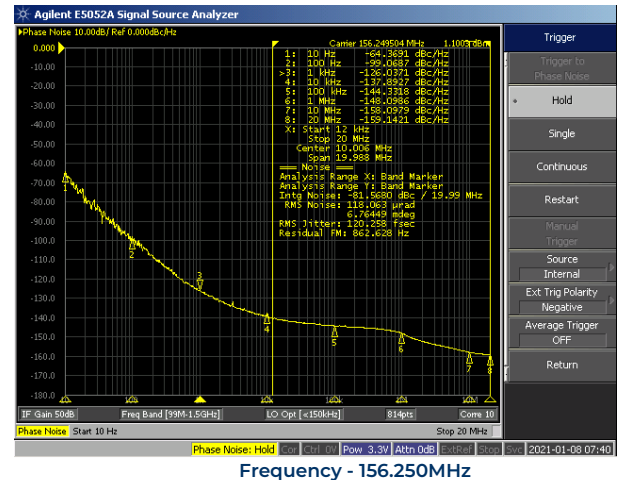
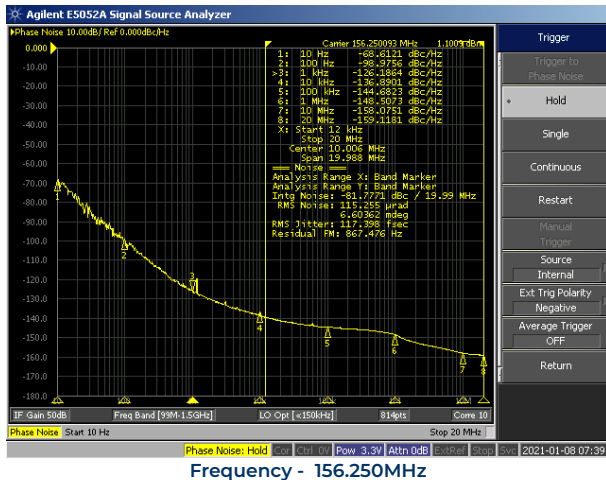


Test Circuit (LVDS)

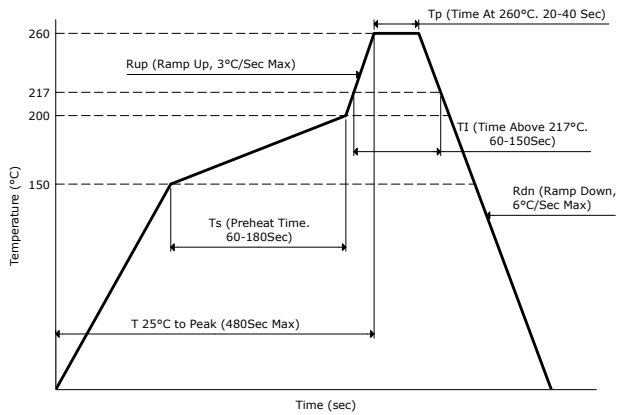
Waveform (LVDS)



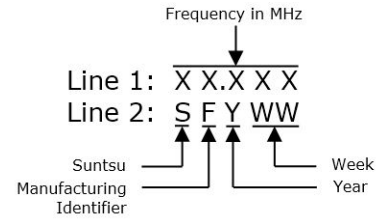
Typical Phase Noise Performance (Measured By Agilent E5052A)



Reflow Profile



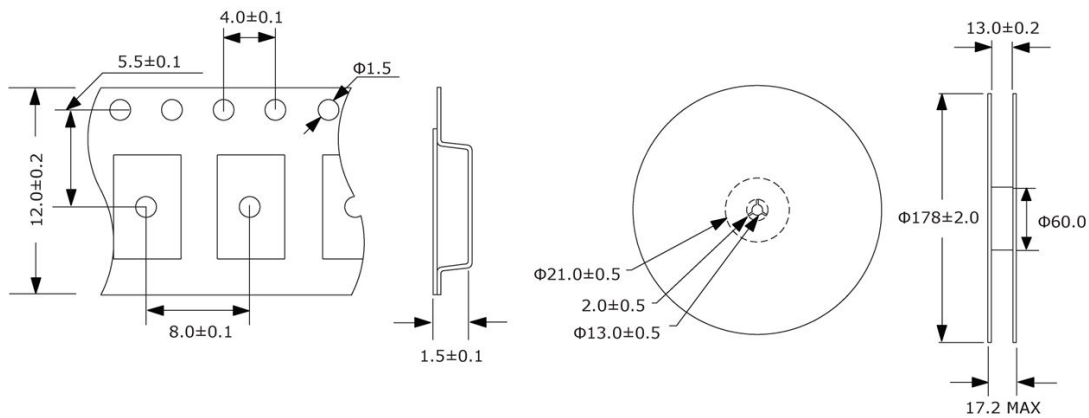
Part Marking



Tape And Reel Dimensions

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.

1,000pcs/Reel



Environmental Specifications

| | |
|----------------------|---------------------------------------|
| Temperature Cycling | MIL-STD-883, Method 1010, Condition B |
| Fine Leak Test | MIL-STD-883, Method 1014, Condition A |
| Gross Leak Test | MIL-STD-883, Method 1014, Condition C |
| Solderability | MIL-STD-883, Method 2003 |
| Moisture Sensitivity | J-STD-020, MSL 1 |

Mechanical Specifications

| | |
|------------------------------|---------------------------------------|
| Mechanical Shock | MIL-STD-202, Method 213, Condition B |
| Vibration | MIL-STD-883, Method 2007, Condition A |
| Moisture Resistance | MIL-STD-883, Method 1004 |
| Resistance to Solvents | MIL-STD-202, Method 215 |
| Resistance to Soldering Heat | MIL-STD-202, Method 210, Condition K |